

**Table S1. Predicted neuropeptides by NeuroPipred predictive tool (<https://webs.iitd.edu.in/raghava/neuropipred/>).**

ID	Seq	Score	Prediction	Hydrophobicity	Hydropathicity	Hydrophilicity
FAR14_SARBU	DPHHDFMRF	0.32528052	Yes	-0.29	-1.33	0.19
NPF1_LEPDE	ARGPQLRLRF	0.63979152	Yes	-0.40	-0.68	0.26
ALLTR_ACRHI	GFKNVALSTARGF	0.6016134	Yes	-0.06	0.23	-0.25
ADFA_TENMO	VVNTPGHAVSYHVV	-1.1651769	No	0.05	0.19	-0.86
TXS6D_CUPSA	INKYREWKNKKN	0.28297396	No	-0.63	-2.65	0.92
TXS6D_CUPSA	INKYREWKNKKN	0.28297396	Yes	-0.63	-2.65	0.92
PPK_SCHGR	DGAETPGAAASLWFGPRV	-0.2569061	Yes	-0.01	-0.02	-0.13
ALL3_RHOPR	QVSLKYPEGKMYSFGL	-0.43973767	Yes	-0.08	-0.31	-0.23
BOL3_BOMPE	IKIMDILAKLGKVLAVH	-1.7130195	No	0.08	1.18	-0.27
BRK_VESMC	TATRRRRGRPPGFSPFR	-0.78063843	No	-0.47	-1.39	0.51
PH1_PERAM	SDLTWTYQSPGDPTNSKN	0.39367822	Yes	-0.27	-1.55	0.10
MK2B_PALPR	VDKPDYRPRPWPRNMI	0.36148854	Yes	-0.43	-1.62	0.49
LYC40_LYCSI	IASHLAFEKLSKLGSKHTML	-0.85372578	No	-0.07	0.14	-0.11
PAP2_SPOEX	ENFAGGCTPGYQRTADGRCKPTF	-0.044915393	No	-0.24	-0.91	0.17
PA11_VESVE	GLLPKVKLVPQISFILSTREN	-0.8437491	No	-0.16	-0.06	0.10
HN423_CYRHA	DCAGYMRECKEKLCCSGYVCSSRWKWCVLPA	1.7179663	No	-0.17	-0.17	-0.04
MSPI2_MELSA	EISCEPGTTFQDKCNTCRGKDGKSAAGCTLKACPQ	0.79004272	Yes	-0.24	-0.62	0.36
TXC1C_CUPSA	GFGSLFKFLAKKVAKTVAQAAKQGAKYIANKQTE	-1.1751568	No	-0.17	-0.34	0.16
TALAA_DROME	LDPTGTYYRRPRDTQDSRQKRRQDCLDPTGQY	0.393764	Yes	-0.57	-2.07	0.85
BX4_LOXGA	ADSRKPDDRYDMSGNDALGDVKLATYEDNPWETFK	0.11494543	Yes	-0.33	-1.37	0.68
CEC_CALVI	GWLKKIGKKIGRVGQHTRDATIQGLAVAQQAANVAATAR	-1.9190137	No	-0.17	-0.26	0.06
DIUH1_TENMO	SPTISITAPIDVLRKTWEQERARKQMVKNREFLNSLN	1.000674	Yes	-0.30	-0.76	0.32
LYC1_LYCSI	GKLQAFKAKMKEIAAQTL	-0.91165539	No	-0.06	0.25	-0.06

ID	Seq	P			
seq1	DPHHDFMRF	Yes	FAR14_SARBU	FMRFamide-14	
seq2	ARGPQLRLRF	Yes	NPF1_LEPDE	Neuropeptide NPF-1	
seq3	GFKNVALSTARGF	Yes	ALLTR_ACRHI	ATRP; Allatotropin-related peptide	
seq4	VVNTPGHAVSYHVY	No	ADFA_TENMO	Antidiuretic factor A	
seq5	INKYREWKNKKN	No	TXS6D_CUPSA	Short cationic peptide-6d	
Seq6	DGAETPGAAASLWFGPRV-amide	Yes	PPK_SCHGR	Pyrokinin, Capa-Pk, Scg-PVK-3	+
Seq7	QVSLKYPEGKMYSFGL	Yes	ALL3_RHOPR	Allatostatin-3, Rhopr-AST-3	
Seq8	IKIMDILAKLGKVLAHV	No	BOL3_BOMPE	Bombolitin-3	+
Seq9	TATRRRRGRPPGFSPFR	No	BRK_VESMC	Vespulakinin-1	+
Seq10	SDLTWTYQSPGDPTNSKN	Yes	PH1_PERAM	Peptide hormone 1	
Seq11	VDKPDYRPRWP RNMI	Yes	MK2B_PALPR	Metalnikowin-2B	+
seq12	IASHLAFEKLSKLGSKHTML	No	LYC40_LYCSI	M-lycotoxin-Ls4a	
seq13	ENFAGGCTPGYQRTADGRCKPTF	No	PAP2_SPOEX	Paralytic peptide 2	+
seq14	GLLPKVKLVEQISFILSTREN R	No	PA11_VESVE	Phospholipase A1 verutoxin-1 (Fragment)	+
seq15	DCAGYMRECKEKLCCSGYVCSSRWKWCVLPAP	No	HN423_CYRHA	U3-theraphotoxin-Hhn1r	
seq16	EISCEPGTTFQDKCNTCRCGKDGKSAAGCTLKACPQ	Yes	MSPI2_MELSA	Serine protease inhibitor 2	
seq17	GFGLFKFLAKKVAKTVAKQAAKQGAKYIANKQTE	No	TXC1C_CUPSA	Cupiennin-1c	
Seq18	LDPTGTYRRPRDTQDSRQKRRQDCLDPTGQY	Yes	TALAA_DROME	Peptide tarsal-less AA	
Seq19	ADSRKPDDRYDMSGNDALGDVKLATYEDNPWETFK	Yes	BX4_LOXGA	Dermonecrotic toxin LgSicTox-beta-LOXN4	+
Seq20	GWLKKIGKKIGRVGQHTRDATIQGLAVAQQAANVAATAR	No	CEC_CALVI	Cecropin	
seq21	SPTISITAPIDVLRKTWEQERARKQMVKNREFLNSLN	Yes	DIUH1_TENMO	Diuretic hormone 1	